

ABSTRACT OF THE INVENTION

An exercise bicycle including a frame having a seat and handlebars, a high-inertia flywheel having a hub at a center of rotation, the flywheel being rotatably supported on the frame at the hub, and a drive train including a drive sprocket, a crank arm attached to and extending from the drive sprocket, and a pedal attached to the crank arm, the drive train being rotatably supported by the frame. The drive train also includes a slave sprocket fixed to the flywheel at the hub, with the drive and slave sprockets connected in a direct-drive relationship, the drive train driveable in a forward and rearward directions to cause the flywheel to rotate. A clutch mechanism is positioned in engagement with the slave sprocket and the hub to create a frictional engagement between the sprocket and the hub, and to establish a break-free force threshold. When the drive train is actuated in the forward direction, the slave sprocket and the hub move together, and when the drive train is actuated in the rearward direction under the influence of a force greater than the break-free force threshold, the clutch mechanism slips between the slave sprocket and the hub, allowing the slave sprocket and the flywheel to move independently of one another. The clutch mechanism including a spring tensioner whereby the break-free force may be adjusted.